Nitrification and Denitrification in the Activated Sludge Process
Michael H. Gerardi

DESCRIPTION

Nitrification and Denitrification in the Activated Sludge Process, the first in a series on the microbiology of wastewater treatment, comprises the critical topics of cost-effective operation, permit compliance, process control, and troubleshooting in wastewater treatment plants. Avoiding the technical jargon, chemical equations, and kinetics that typically accompany such texts, Nitrification and Denitrification in the Activated Sludge Process directly addresses plant operators and technicians, providing necessary information for understanding the microbiology and biological conditions that occur in the treatment process.

Of special interest to wastewater treatment plant operators are the bacteria that degrade nitrogenous wastes—the nitrifying bacteria—and the bacteria that degrade carbonaceous wastes—the cBOD-removing bacteria. Both groups of bacteria need to be routinely monitored and operational conditions favorably adjusted to ensure desired nitrification. Each chapter in this groundbreaking study offers a better understanding of the importance of nitrification and denitrification and the bacteria involved in these crucial processes.

Chapters include:

- Organotrophs
- The Wastewater Nitrogen Cycle
- Nitrite Ion Accumulation
- Dissolved Oxygen
- Denitrifying Bacteria
• Gaseous End Products

• Free Molecular Oxygen

• The Occurrence of Denitrification

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**ABOUT THE AUTHOR**

MICHAEL H. GERARDI is Research Project Associate and Instructor at the Pennsylvania State University in Linden, Pennsylvania.

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